| Notice of Allowability | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/531,482 | ULRICH ET AL. | |
| | Examiner | Art Unit | |
| | /Susan W. Berman/ | 1711 | |

***-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--***

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *filing 4-15-2005*.

2. ☒ The allowed claim(s) is/are *1-6,8-13,15,16 and 18*.

3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   **Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 7/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

## REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

The prior art cited herein and otherwise known to the examiner does not teach or suggest the compounds set forth in claim 1. The prior art considered to be closest to the instantly claimed invention is discussed below.

Husler et al (6,191,182) disclose phenyl alkyl ketones substituted with a cyclic amine corresponding to applicant's claimed formula (II). See formula (IV) in column 8 and column 23, lines 26-40, in Example 25. The compounds are taught for photopolymerization of ethylenically unsaturated compounds (Abstract, column 11, lines 6-12, and column 12, line 64, to column 13, line 7). Addition of thermal inhibitors, compounds to enhance dark storage stability, light stabilizers such as benzotriazoles or benzophenones, and second photoinitiators is taught (column 12, lines 10-31).

Sato et al (6,344,299) disclose photopolymerization initiators of formula (I) shown in the Abstract in mixtures with photoinitiators corresponding to applicant's formula (II) in column 5, lines 11-19. Sato et al teach a preferred mixture of 4,4-bis(diethylamino)benzophenone, 2-benzyl-2-dimethylamino-1-(4-morpholinophenyl) butanone-1 with 2-methyl-1-[4-(methylthio)phenyl]-2-morpholinopropan-1-one that provides high sensitivity, compatibility with a resin and storage stability (column 5, lines 54-67).

Desobry et al (5,077,402) disclose α-aminoacetophenone photoinitiators for photopolymerization of ethyenically unsaturated compounds, especially pigmented compositions. Compounds corresponding to applicant's formula (II) are taught (column 6, line 34, to column 7, line 10, and column 11, lines 49-50). A second photoinitiator, such as an

acetophenone derivative, can be added (column 19, lines 55-60). Uses for the compositions are taught in column 20, lines 20-37.

Kohler et al (5,532,112) discloses coreactive photoinitiators of the formula RG-I-IN wherein "IN" can be a phenyl ketone substituted with a morpholino ring and "RG" can be a hydroxyl group. However, the structure of the compounds is different from the structure of applicant's formula (I) compound, which is not a phenyl ketone.

Klinkenberg et al (6,579,913) disclose photoactivable coating compositions comprising a base-catalysed polymerizable material and a photolatent base wherein the photolatent base can be an α-aminoacetophenone compound containing alkoxy groups corresponding to applicant's formula (II) wherein $R_2$ and $R_3$ are alkoxy groups. See column 3, lines 13-36, and Example 5. Additives such as heat stabilizers and UV absorbers and uses for the coating compositions are taught in column 8, lines 46-65).

Nishimura et al (7,071,255) disclose radiation sensitive compositions comprising a base decomposable compound, a radiation sensitive decomposer and a stabilizer. The base generator can be an amino acetophenone compound of formula (26) in column 19, lines 1-24, and column 20, lines 52-62. Stabilizers for stabilizing the residual decomposable compound after exposure to radiation are taught in columns 21, lines 5-26. UV light absorbers are taught in column 27, lines 4-22.

The following references also teach compositions comprising 2-benzyl-2-dimethylamino-1-(4-morpholinophenyl) butanone-1 as photoinitiator and known UV stabilizers, such a hydroxyl benzophenones, hydroxy benzotriazoles or hindered amines: Valet (6,620,857), Powers et al

(6,228,289) and Suhadolnik et al (7,173,071). Lazzari et al (6,140,326) disclose morpholinone compounds as light stabilizers.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to /Susan W. Berman/ whose telephone number is 571 272 1067. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571 272 1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SB
7/21/2007

/Susan W Berman/
Primary Examiner
Art Unit 1711